Message

From: Lindstrom, Andrew [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=04BF7CF26AA44CE29763FBC1C1B2338E-LINDSTROM, ANDREW]
Sent: 6/15/2016 7:18:47 PM
To: Gaines, Linda [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4997ab5b3fb248e2b3dab289acd408b1-Gaines, Linda]
Subject: RE: PFAS in private wells
Attachments: Proposed PFAS Research Plan 2016.docx

Linda,

I'm not sure if you know about this, but ORD has basically stopped all research on the PFAS. We haven't had any "official" new work for many years now, and as far as I know, there are no plans for anything in the future.

We're hoping that OW's new Health Advisories for PFOA and PFOS will change this however, as it is very apparent there is an enormous amount of work to do.

With this in mind, a few of us from NERL and NHEERL have put together a draft PFAS research outline (attached above) highlighting the major tasks that we see as being most urgent. One of the items in this list is a toxicological evaluation of PFHxS, as we've noted its high prevalence in the UCMR3 database and we note that it is usually seen with PFOS at AFFF impacted sites.

I am interested in the NSF filter evaluation protocol and would be happy to talk with anyone if they think I can help. Lots of people need these filters and it would be great to be able to help people get safer water.

Thank you very much,

Andy

From: Gaines, Linda
Sent: Wednesday, June 15, 2016 9:54 AM
To: Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>
Subject: RE: PFAS in private wells

Andy,

Thank you this is perfect. I had the version of the paper without the supporting information. I have been trying to get some information from FFRRO that they have about AFFF impacted DoD
Sites. You are definitely correct about the PFOS. They have groundwater concentrations that are off the charts.

I agree with you about the other PFAS. I relayed that information to Elissa. They evidently will have tests for two different types of filters, those with performance indicating device and those without. I know that at sites, the remediation operations are having trouble with early breakthrough with the shorter chains. I think the performance indicating devices, the other PFAS will not be as much an issue as the ones without. She said they are only going to certify to remove PFOA and PFOS, not looking at this time at the others. The current effort is a first phase, and it may be with the next phase they will look at other PFAS. Conversely, the issue we have over here in Superfund, is without toxicity numbers for other PFAS, we cannot do risk assessments or calculate clean up levels. We can build in uncertainty for PFOA and PFOS clean up and risk based on presence of other PFAS, but we are limited in what we can do. OW has even less flexibility than us in terms of what they can tell people with the health advisories. I can already tell you that at least at DoD sites, PFHxS is already a concern that we are just not sure how to tackle, from a regulatory standpoint.

One more thing, Elissa asked me to serve on an advisory panel to review the protocol they are developing. The protocol would consist of among other steps of setting up the sample, flushing, and analysis of the filtered water. They are looking for two EPA people to help. I would actually really like to help, or at the very least stay informed about the work they are doing. The reason is I am on a workgroup to develop a standardized analytical method for PFAS in "dirty" water that we can get multi-lab validated. The NSF protocol may end up helping to inform the PFAS analytical workgroup. I say this because I have already learned a little information that I plan to pass along to the workgroup. They are not using 537 for their method, and one of the reasons is they are using direct inject instead of extraction. This topic has come up on the workgroup. Anyway, back to the request, I passed the request to a contact in OW because really this is more their domain. I don't want to step on toes and help if OW thinks two OW people should be the ones to help. However, while I wait to hear back from them, if they are not interested (or if they are and I just relay everything to NSF for them to decide), would you be interested in helping, or can you think of a good person in ORD that might be?

Thanks again,
Linda

Linda G.T. Gaines, Ph.D., P.E.
Environmental Health Scientist
U.S. Environmental Protection Agency
OLEM/OSRTI/ARD/Science Policy Branch
Gaines.Linda@epa.gov
Phone: (703) 603-7189

From: Lindstrom, Andrew
Sent: Wednesday, June 15, 2016 7:28 AM
To: Gaines, Linda <Gaines.Linda@epa.gov>
Subject: RE: PFAS in private wells

Linda,

I think you are right about a wider range of concentration range for PFOS and PFOA in well water. For the work we did in Decatur, the tables in the supporting information of the attached paper list all of the concentrations for the PFAS we measured (Tables S6A and S6B). PFOA had a maximum concentration of 6400 ng/L whereas PFOS only went to 150 ng/L. At AFFF impacted sites I would expect the PFOS to be at least two or three orders of magnitude higher (ug/L range).

Another concern for the point of use water filter users is going to be the other PFAS that will typically be present. The collection efficiency for most sorbents for the lower molecular weight materials (<C7) is usually pretty poor, so I'm concerned about users having a false sense of security if they use a PFOS rated product. This also extends to the new replacement PFAS which are still pretty much unknown and completely uncharacterized with regard to removal efficiency.

Please let me know if we can help in any way.

Thank you,

Andy

From: Gaines, Linda
Sent: Tuesday, June 14, 2016 4:01 PM
To: Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>
Subject: PFAS in private wells

Andrew,

I think we have met or talked before, but it not occurring to me at this moment when. (ACS?) In any event, I work on all things PFAS in Superfund. To make a long story short, I have been in correspondence with Elissa Valentine at NSF International (evalentine@nsf.org). They are currently working on a protocol where consumer filters and ROs could be certified to remove PFOA and PFOS. Part of what I have been helping her with, is to find data on concentrations of PFOA and PFOS that have been found in drinking water, and thus what they need to use for challenge water. That is what ranges of PFOA and PFOS might be found and can the filter remove. I have already referred her to UCMR3 data. I informed her that the private wells were going to be a potentially bigger issue with wider concentration ranges. I know you have done a lot of research on PFAS including the Decatur area. In your 2011 paper "Application of WWTP Biosolids and Resulting Perfluorinated Compound Contamination of Surface and Well Water in Decatur, Alabama, USA" it states that several private wells were sampled by Region 4. Would it be possible for you to share some of that information with NSF? She mainly needs concentration ranges for PFOA and PFOS. At one point she was hoping to get normal water parameters such as hardness, pH, etc. corresponding to the PFOA and PFOS concentrations, but I don't think that is as critical. Obviously she does not need specifics about the well such as owners, locations, etc. No privacy information, just water information. Do you think you might be able to help? If you don't think there is anything you can share, I can just send copies of some your and others papers with summary information from the wells.

Thank you,
Linda

Linda G.T. Gaines, Ph.D., P.E.
Environmental Health Scientist
U.S. Environmental Protection Agency
OLEM/OSRTI/ARD/Science Policy Branch
Gaines.Linda@epa.gov
Phone: (703) 603-7189